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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/449,085	11/24/1999	KARTHIKEYAN (NMI) RAMASAMY	8343	5848

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2177

DATE MAILED: 07/16/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.	RAMASAMY ET AL.
Examiner	Art Unit
Harold E. Dodds, Jr.	2177

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 09 May 2002.

2a) This action is FINAL. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

4) Claim(s) 1-35 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 1-35 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on 24 November 2000 is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.

12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) The translation of the foreign language provisional application has been received.

15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) Notice of References Cited (PTO-892) 4) Interview Summary (PTO-413) Paper No(s). _____.
2) Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) Notice of Informal Patent Application (PTO-152)
3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____. 6) Other:

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 2, 11, 12, 21, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wygodny et al. (U.S. Patent No. 6,282,701), Grimsrud (U.S. Patent No. 5,726,913), and Chaudhuri et al. (U.S. Patent No. (5,926,813)).

3. Wygodny rendered obvious independent claims 1, 11, and 21 by the following:

“...storing an...trace record...” at col. 7, lines 40-43.

“...for each execution thread...” at col. 8, lines 63-66.

“...including a thread identifier (ID)...” at col. 19, lines 47-48.

“...and a time stamp...” at col. 20, lines 27-30.

“...retrieving the...trace information...” at col. 8, lines 18-20.

“...presenting the retrieved...trace information to a user...” at col. 8, lines 18-20.

Wygodny does not teach the use of execution trace records and the obtaining of trace information during a query.

4. However, Grimsrud teaches the use of execution trace records as follows:

“...execution trace record...” at col. 1, lines 59-62.

“...execution trace information...” at col. 1, lines 59-62.

It would have been obvious to one ordinarily skilled in the art at the time of the invention to use execution trace records to capture trace information in order to have a convenient means of storing the trace data.

Grimsrud does not teach the obtaining of trace information during a query.

5. However, Chaudhuri teaches the obtaining of trace information during a query as follows:

"...after execution of the query..." at col. 2, lines 21-24 and col. 5, lines 62-64.

It would have been obvious to one ordinarily skilled in the art at the time of the invention to use execution trace records to capture trace information about queries in order to have a convenient means of determining the processes that occurred during the query and the amounts of memory required by these processes.

6. A per claims 2, 12, and 22, the "...step of executing the query..." is taught by Chaudhuri at col. 2, lines 21-24,
the "...step of storing an...trace record..." is taught by Wygodny at col. 7, lines 40-43,
the "...execution trace record..." is taught by Grimsrud at col. 1, lines 59-62,
the "...for each execution thread..." is taught by Wygodny at col. 8, lines 63-66,
and the "...is performed while executing the query..." is taught by Chaudhuri at col. 2, lines 21-24.

7. Claims 3, 13, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wygodny, Grimsrud, and Chaudhuri as applied to claims 1, 11, and 21 above respectively, and further in view of Goldring (U.S. Patent No. 5,613,113).

As per claims 3, 13, and 23, the "...comprises a plurality of execution threads..." is taught by Wygodny at col. 8, lines 63-66, the "...presenting the retrieved...trace information to the user..." is taught by Wygodny at col. 8, lines 18-20, the "...execution trace information..." is taught by Grimsrud at col. 1, lines 59-62, the "...execution trace records..." is taught by Grimsrud at col. 1, lines 59-62, the "...according to the thread ID..." is taught by Wygodny at col. 19, lines 47-48, and the "...time stamp..." is taught by Wygodny at col. 20, lines 27-30, but the "...comprises the step of synchronizing the...trace records..." is not taught by either Wygodny, Grimsrud, or Chaudhuri.

However, Goldring teaches the synchronization of trace records as follows:

"...To trace the changes and recreate the condition of the data base at various points in time, it is necessary to join up the change operations with the commit operations to synchronize the records in the activity log with the changes that actually were committed..." at col. 45-50.

It would have been obvious to one ordinarily skilled in the art at the time of the invention to synchronize the execution trace records in order to provide an ordered set of execution trace records for the viewing by the user and to facilitate the user's analysis of the data.

8. Claims 4, 14, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wygodny, Grimsrud, and Chaudhuri as applied to claims 1, 11, and 21 above respectively, and further in view of Rust (U.S. Patent No. 5,978,928).

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As per claims 4, 14, and 24, the "...time stamp is an absolute time stamp..." is not taught by either Wygodny, Grimsrud, or Chaudhuri.

However, Rust teaches the use of an absolute time stamp as follows:

"...Conventional time stamp systems are absolute. Absolute time stamp systems initiate a time clock when power is supplied to the system for the first time..." at col. 1, lines 20-22.

It would have been obvious to one ordinarily skilled in the art at the time of the invention to use an absolute time stamp in the execution trace records in order to provide a reference time for the synchronism of these records.

9. Claims 5, 15, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wygodny, Grimsrud, and Chaudhuri as applied to claims 1, 11, and 21 above respectively, and further in view of Bamford et al. (U.S. Patent No. 6,243,702).

As per claims 5, 15, and 25, the "...time stamp is a logical time stamp..." is not taught by either Wygodny, Grimsrud, and Chaudhuri.

However, Bamford teaches the use of a logical time stamp as follows:

"...To provide transactions with database snapshots, a multi-version parallel database system typically stamps each version of data with a logical timestamp..." at col. 1, lines 30-32.

It would have been obvious to one ordinarily skilled in the art at the time of the invention to use a logical time stamp in the execution trace records in order to provide a reference time for the synchronism of these records.

10. Claims 6, 16, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wygodny, Grimsrud, and Chaudhuri as applied to claims 1, 11, and 21 above respectively, and further in view of Maier et al. (U.S. Patent No. 5,625,815).

As per claims 6, 16, and 26, the "...storing an...trace record..." is taught by Wygodny at col.7, lines 40-43, the "...execution trace record..." is taught by Grimsrud at col. 1, lines 59-62, the "...for each execution thread..." is taught by Wygodny at col. 8, lines 63-66, the "...in at least one execution log file..." is taught by Wygodny at col. 3, lines 10-11, but the "...comprises means for splitting the execution log file into a plurality of partitions..." is not taught by either Wygodny, Grimsrud, or Chaudhuri.

However, Maier teaches the splitting of files into multiple partitions as follows:

"...For the purposes of explaining the Split Partition procedure, it will be assumed that a partition of a database file is being split into two partitions, with the understanding that the same steps would be performed for splitting a previously unpartitioned database file or for splitting an index file or a partition of an index file..." at col. 9, lines 20-26.

It would have been obvious to one ordinarily skilled in the art at the time of the invention to be able to split log files into multiple partitions in order to provide better memory management for the log file and to facilitate the synchronism of log records.

11. Claims 7, 8, 17, 18, 27, and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wygodny, Grimsrud, Chaudhuri, and Maier as applied to claims above, and further in view of Orcutt (U.S. Patent No. 6,185,575).

As per claims 7, 17, and 27, the "...execution log file..." is taught by Wygodny at col. 3, lines 10-11, the "...is split into the plurality of partitions..." is taught by Maier at col. 9, lines 20-26,

the "...based upon an amount of execution trace information..." is taught by Wygodny at col. 8, lines 18-20,

but the "...amount of storage space..." is not taught by either Wygodny, Grimsrud, Chaudhuri, or Maier.

However, Orcutt teaches the use of storage space as follows:

"...In addition, although the aforementioned patents provide useful methods for reclaiming storage space by changing cluster size and/or partition size, the patents do not present certain other methods for optimizing NTFS storage efficiency..." at col. 33-37.

It would have been obvious to one ordinarily skilled in the art at the time of the invention to use the amount of available storage space as a factor in determining when to split log files into partitions in order to optimize storage efficiency.

12. As per claims 8, 18, and 28, the "...steps of reusing the partitions..." is taught by Maier at col. 9, lines 20-26, the "...when the execution log file..." is taught by Wygodny at col. 3, lines 10-11, but the "...exceeds a partition size..." is not taught by either Wygodny, Grimsrud, Chaudhuri, or Maier.

However, Orcutt teaches the use of the partition size as follows:

"...In addition, although the aforementioned patents provide useful methods for reclaiming storage space by changing cluster size and/or partition size, the patents do not present certain other methods for optimizing NTFS storage efficiency..." at col. 33-37.

It would have been obvious to one ordinarily skilled in the art at the time of the invention to use the partition size as a factor in determining when to split log files into partitions in order to optimize storage efficiency.

13. Claims 9, 19, and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wygodny, Grimsrud, and Chaudhuri as applied to claims 1, 11, and 21 above respectively, and further in view of Pizano (U.S. Patent No. 6,021,434).

As per claims 9, 19, and 29, the "...step of presenting the retrieved execution trace information to a user..." is taught by Wygodny at col. 8, lines 18-20. the "...arranging the retrieved...trace records..." is taught by Wygodny at col. 8, lines 18-20, the "...execution trace records..." is taught by Grimsrud at col. 1, lines 59-62, the "...according to the thread ID..." is taught by Grimsrud at col. 19, lines 47-48, the "...time stamp..." is taught by Grimsrud at col. 20, lines 27-30, but the "...accepting a presentation command..." and the "...playback command..." are not taught by either Wygodny, Grimsrud, or Chaudhuri.

However, Pizano teaches the use of playback commands as follows:
"...Upon completion of the fax sending task, VPA 14 plays a prompt that gives the user, through playback commands 25, the options to playback the audio portion of the video..." at col. 3, lines 44-47.

It would have been obvious to one ordinarily skilled in the art at the time of the invention to provide the user with playback commands in order for the user to view the execution trace data.

14. Claims 10, 20, and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wygodny, Grimsrud, Chaudhuri, and Pizano as applied to claims 9,

19, and 29 above respectively, and further in view of Sharples et al. (U.S. Patent No. 4,772,966).

As per claims 10, 20, and 30, the "...presentation command..." is taught by Pizano at col. 3, lines 44-47, but the "...is selected from the group comprising a play command, a stop command, a reverse play command, a fast play command, and a fast reverse play command..." is not taught by either Wygodny, Grimsrud, Chaudhuri, or Pizano.

However Sharples teaches the use of these commands as follows:

"...The synchronizer then generates for the slave transport rewind, fast-forward, stop, play and capstan speed command signals..." at col. 1, lines 36-38.

"...it is possible to reverse the direction command..." at col. 13, line 52.

It would have been obvious to one ordinarily skilled in the art at the time of the invention to provide the user with a set of playback commands in order for the user to have flexibility in the viewing of the execution trace data.

15. Claims 31-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chaudhuri, Wygodny, Grimsrud, and Hallmark et al. (U.S. Patent No. 5,857,180).

16. Chaudhuri rendered obvious independent claim 31 by the following:

"...monitoring an execution of a query..." at col. 2, lines 21-24 and col. 5, lines 62-64.

"...comprising a data server..." at col. 1, lines 24-26.

"...for storing an execution plan..." at col. 7, lines 64-67 and col. 8, lines 1-7.

"...and the execution plan..." at col. 7, lines 64-67 and col. 8, lines 1-7.

"...after execution of the query..." at col. 2, lines 21-24 and col. 5, lines 62-64.

Chaudhuri does not teach the use of execution threads, the storing of execution trace records, the use of thread identifiers, the use of time stamps, the use of a query coordinator, the synchronizing of records, a client process, and displaying the retrieved execution trace information to a user.

17. However, Wygodny teaches the use of execution threads, the storing of trace records, the use of thread identifiers, the use of time stamps, a client process, and displaying the retrieved execution trace information to a user as follows:

"...comprises at least one execution thread..." at col. 8, lines 63-66.

"...for executing the execution thread..." at col. 8, lines 63-66.

"...for storing an...trace record..." at col. 7, lines 40-43.

"...for the executed execution thread..." at col. 8, lines 63-66.

"...information including a thread identifier (ID)..." at col. 19, lines 47-48

"...and a time stamp..." at col. 20, lines 27-30.

"...having a time stamp..." at col. 20, lines 27-30.

"...and a client process ..." at col. 3, lines 4-7.

"...for displaying the retrieved...trace information to a user..." at col. 8, lines 18-20.

It would have been obvious to one ordinarily skilled in the art at the time of the invention to use a client process to produce execution threads containing thread identifiers and time stamps to be used in the display of the trace information in order to provide a set of processes to produce, store, and display trace information to provide for an analysis of the steps taken during a query process.

Wygodny does not teach the use of execution trace records, the use of a query coordinator, and the synchronizing of records.

18. However, Grimsrud teaches the use of execution trace records as follows:
“...execution trace records...” at col. 1, lines 59-62.
“...the execution trace record...” at col. 1, lines 59-62.
“...the execution trace record having...” at col. 1, lines 59-62.
“...execution trace information...” at col. 1, lines 59-62.

It would have been obvious to one ordinarily skilled in the art at the time of the invention to use execution trace records to capture trace information in order to have a convenient means of storing the trace data.

Grimsrud does not teach the use of a query coordinator and the synchronization of records.

19. However, Hallmark teaches use of a query coordinator and the synchronization of records as follows:

“...a query coordinator...” at col. 2, lines 59-60.
“...and for retrieving and synchronizing...” at col. 22, lines 14-17.

It would have been obvious to one ordinarily skilled in the art at the time of the invention to use a query coordinator process to produce, store and execute the queries and to store the execution plans in order to provide an orderly and controlled process of the execution of queries. Likewise, it would have been obvious to one ordinarily skilled in the art at the time of the invention to synchronize the execution trace records in order

to provide an ordered set of execution trace records for the viewing by the user and to facilitate the user's analysis of the data.

20. As per claim 32, the "... data server..." is taught by Chaudhuri at col. 1, lines 24-46, the "...and the query coordinator..." is taught by Hallmark at col. 2, lines 59-60, the "...stores the...trace record..." is taught by Wygodny at col. 7, lines 40-43, the "...execution trace record..." is taught by Grimsrud at col. Col. 1, lines 59-62, the "...execution plan..." is taught by Chaudhuri at col. 7, lines 64-67 and col. 8, lines 1-7, and the "...while executing the query..." is taught by Chaudhuri at col. 2, lines 21-24 and col. 5, lines 62-64.

21. As per claim 33, the "...query execution..." is taught by Chaudhuri at col. 2, lines 21-24 and col. 5, lines 62-64, the "...comprises a plurality of execution threads..." is taught by Wygodny at col. 8, lines 63-66, the "...query coordinator ..." is taught by Hallmark at col. 2, lines 59-60, the "...synchronizes..." is taught by Hallmark at col. 22, lines 14-17, the "...execution trace records..." is taught Grimsrud at col. Col. 1, lines 59-62, the "...according to the thread ID..." is taught by Wygodny at col. 19, lines 47-48, and the "...time stamp..." is taught by Wygodny at col. 20, lines 27-30.

22. Claim 34 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wygodny, Grimsrud, Chaudhuri, and Hallmark as applied to claim 31 above, and further in view of Rust.

As per claim 34 the "...time stamp is an absolute time stamp..." is not taught by either Chaudhuri, Wygodny, Grimsrud, or Hallmark.

However, Rust teaches the use of an absolute time stamp as follows:

"...Conventional time stamp systems are absolute. Absolute time stamp systems initiate a time clock when power is supplied to the system for the first time..." at col. 1, lines 20-22.

It would have been obvious to one ordinarily skilled in the art at the time of the invention to use an absolute time stamp in the execution trace records in order to provide a reference time for the synchronism of these records.

23. Claim 35 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wygodny, Grimsrud, Chaudhuri, and Hallmark as applied to claim 31 above, and further in view of Bamford.

As per claim 35, the "...time stamp is a logical time stamp..." is not taught by either Wygodny, Grimsrud, Chaudhuri, or Hallmark.

However, Bamford teaches the use of a logical time stamp as follows:

"...To provide transactions with database snapshots, a multi-version parallel database system typically stamps each version of data with a logical timestamp..." at col. 1, lines 30-32.

It would have been obvious to one ordinarily skilled in the art at the time of the invention to use a logical time stamp in the execution trace records in order to provide a reference time for the synchronism of these records.

Response to Arguments

24. Applicant's arguments filed 9 May 2002 have been fully considered but they are not persuasive. In the first argument for claims 1, 11, and 21 on page 14, paragraph 2, the Applicants state as follows:

"Turning first to the Chaudhuri reference, the Applicants respectfully disagree that the cited passage discloses obtaining trace information during a query. The first passage merely indicates that a cost estimate is performed using a query optimizer. Given that query optimization is typically a pre-processing activity, the Applicants do not understand how this statement discloses obtaining trace information during a query."

The phrase "during a query" does not appear in claims 1, 11, and 21, but does appear in claims 2, 12, and 22, which are dependent on claims 1, 11, and 21, respectively.

However, Chauduri does teach the obtaining of trace records during queries as follows:

"...During normal execution of database server 220 in accessing database 210 in accordance with various queries, query optimizer 240 ignores what-if index entries 234 and therefore generates execution plans over indexes currently existing in database server 220 only..." at col. 7, lines 64-67 and col. 8, line 1.

"...For embodiments supporting SQL queries, workload 304 may be generated using SQL Trace utility..." at col. 5, lines 62-64.

The combining of these two teachings of Chauduri clearly indicates the capability of obtaining trace records during queries.

25. In the second argument for claims 1, 11, and 21 on page 14, paragraph 4, the Applicants state as follows:

"Further, while the Grimsrud reference refers to "execution trace records", those records comprise addresses of accesses, the execution trace records do not refer to individual execution threads, and are used to solve a completely different problem than The Applicants' invention (that of to determine workloads of locality dependent subsystems). Since it is used to solve a completely different problem than that solved by the Applicants' invention, the Applicants respectfully disagree that there is any teaching to modify Wygodny reference according to Grimsrud or Chaudhuri."

Wygodny teaches the use of trace trees to display records of trace data as follows:

"...The analyzer 106 comprises a User Interface module that reads trace data, either from the trace buffer 105 (during on-line mode tracing) or from the trace log file 122 (e.g. after remote tracing) and displays the data in a format, such as a trace tree, that shows the sequence of traced events that have occurred during execution of the client 102...This allows the analyzer 106 to display data from a trace log file 122 with more than a million trace records..." at col. 8, lines 2-20.

The branches of the trace trees taught by Wygodny are analogous to the execution threads of the invention. For this reason, the combination of the teachings of Wygodny, Grimsrud, and Chaudhuri refute the second argument of the Applicants.

26. In the third argument for claims 3, 13, and 23 on page 15, paragraph 3, the Applicants state as follows:

"Goldring teaches synchronizing records in an activity log with database commitments to trace data changes. It does not teach synchronizing trace records according to thread and ID."

The Examiner agrees that Goldring does not teach the use of thread identifiers. This has been taught by Wygodny as follows:

"...The thread caption bar 320 contains a name field, a process ID number field, and a thread ID number field 321..." at col. 19, lines 47-48.

Wygodny teaches grouping trace records by thread ID, but does not teach the synchronizing of the records by time. This is taught by Goldring as follows:

"...To trace the changes and recreate the condition of the data base at various points in time, it is necessary to join up the change operations with the commit operations to synchronize the records in the activity log with the changes that actually were committed..." at col. 2, lines 45-50.

It is clear that the combination of teachings by Wygodny and Goldring indicates the synchronization of execution trace records by thread ID and time.

27. In the fourth argument for claims 4, 5, 14, 15, 24, and 25 on page 15, paragraph 5, the Applicants state as follows:

"Assuming arguendo that the Rust reference teaches an absolute time reference and the Bamford reference teaches a logical time stamp, neither of the references teaches the application of such time stamps to the problem addressed by the Applicants' invention. Further, if it would be obvious to modify the Wygodny, Grimsrud, and Chaudhuri references to use an absolute time stamp for purposes of synchronization, how then is it also obvious to modify the same references to use a logical time stamp also obvious to achieve the same goal?"

Claims 1, 11, and 21 indicate the use of a time stamp. Whereas, claims 4, 14, and 24 indicate that this time stamp is an absolute time stamp and claims 5, 15, and 25 indicate that this time stamp is a logical time stamp. The implementation of an absolute time stamp and a logical time stamp are different. However, regardless of the implementation it would have been obvious to one ordinarily skilled in the art at the time of the invention to use either type of time stamp to assist in the chronological ordering of a set of trace records.

Conclusion

28. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

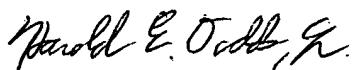
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

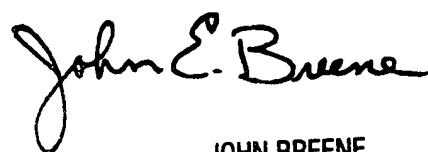
29. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Harold E. Dodds, Jr. whose telephone number is (703)-305-1802. The examiner can normally be reached on Monday - Friday 8:00 - 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John E. Breene can be reached on (703)-305-9790. The fax phone numbers for the organization where this application or proceeding is assigned are (703)-305-9730 for regular communications and 703-746-7238 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)-305-3900.



Harold E. Dodds, Jr.
Patent Examiner
July 12, 2002



JOHN BREENE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100